What we claim is:

1. A medical device, comprising:

a first component having an outer surface including an outer engagement portion;

a second component having an inner surface including an inner engagement portion, the inner engagement portion configured to fit over the outer engagement portion; and

an aerated adhesive layer positioned between the inner engagement portion and the outer engagement portion.

2. The medical device of claim 1, wherein the aerated adhesive layer resists delamination between the aerated adhesive layer, the inner engagement portion and the outer engagement portion.

3. The medical device of claim 1, wherein the aerated adhesive layer absorbs stresses resulting from curing of the aerated adhesive.

4. The medical device of claim 1, wherein the aerated adhesive layer comprises distensible regions.

5. The medical device of claim 1, wherein the aerated adhesive layer comprises a light-curable adhesive.

6. The medical device of claim 5, wherein the light-curable adhesive

comprises an adhesive selected from the group consisting of acrylic, epoxy, acrylic/epoxy, and acrylic/urethane based adhesives.

7. The medical device of claim 1, wherein the aerated adhesive layer comprises a plurality of voids.

8. The medical device of claim 7, wherein the plurality of voids comprise at least about 25 percent volume of the aerated adhesive layer.

9. The medical device of claim 7, wherein the voids include an inert gas.

10. The medical device of claim 9, wherein the inert gas comprises N_2.

11. The medical device of claim 9, wherein the inert gas is at ambient pressure.

12. The medical device of claim 9, wherein the inert gas is at greater than ambient pressure.

13. The medical device of claim 1, wherein the aerated adhesive layer has an effective density that is about 25 to about 50 percent less than a density of the adhesive material itself.

14. The medical device of claim 1, wherein a gap between the outer surface of the first component and the inner surface of the second component is at least about 0.001 inch.

15. The medical device of claim 1, wherein the aerated adhesive layer has an average thickness that is in the range of about 0.002 inch to about 0.008 inch.

16. The medical device of claim 1, wherein the first component comprises an elongate shaft and the second component comprises a hub.

17. The medical device of claim 1, wherein the first component comprises an elongate shaft and the second component comprises a strain relief.

18. The medical device of claim 1, wherein the first component comprises a strain relief and the second component comprises a hub.

19. A method of forming a medical device comprising a first component having an outer surface and a second component having an inner surface, the method comprising steps of:

disposing an aerated adhesive layer over at least a portion of the outer surface;

disposing the second component over the first component such that at least a portion of the inner surface contacts the aerated adhesive layer; and

curing the aerated adhesive layer.

20. The method of claim 19, wherein the aerated adhesive comprises an adhesive selected from the group consisting of acrylic, epoxy, acrylic/epoxy, and acrylic/urethane based adhesives, with a plurality of voids dispersed within the adhesive.

21. The method of claim 20, wherein the plurality of voids comprise at least about 25 percent volume of the aerated adhesive layer.

22. The method of claim 20, wherein the method is carried out under an inert atmosphere.

23. The method of claim 22, wherein the inert atmosphere comprises nitrogen and is at a pressure greater than ambient atmospheric pressure.

24. The method of claim 19, wherein the aerated adhesive layer has an effective density that is about 25 to about 50 percent less than a density of the adhesive material itself.

25. The method of claim 19, wherein disposing the second component over the first component results in a gap therebetween that is at least about 0.001 inch.

26. The method of claim 19, wherein the first component comprises an elongate shaft and the second component comprises a hub.

27. The method of claim 19, wherein the first component comprises an elongate shaft and the second component comprises a strain relief.

28. The method of claim 19, wherein the first component comprises a strain relief and the second component comprises a hub.

29. A method of forming a medical device comprising a first component having an outer surface and a second component having an inner surface, the method comprising steps of:

disposing the second component over the first component such that at least a portion of the inner surface of the second component is proximate at least a portion of the outer surface of the first component;

injecting an aerated adhesive between the outer surface of the first component and the inner surface of the second component to form an aerated adhesive layer; and

curing the aerated adhesive layer.

30. The method of claim 29, wherein the aerated adhesive comprises an adhesive selected from the group consisting of acrylic, epoxy, acrylic/epoxy, and acrylic/urethane based adhesives, with a plurality of voids dispersed within the adhesive.

31. The method of claim 30, wherein the plurality of voids comprise at least about 25 percent volume of the aerated adhesive layer.

32. The method of claim 30, wherein the method is carried out under an inert atmosphere.

33. The method of claim 32, wherein the inert atmosphere comprises nitrogen and is at a pressure greater than ambient atmospheric pressure.

34. The method of claim 29, wherein the aerated adhesive layer has an effective density that is about 25 to about 50 percent less than a density of the adhesive material itself.

35. The method of claim 29, wherein disposing the second component over the first component results in a gap therebetween that is at least about 0.001 inch.

36. The method of claim 29, wherein the first component comprises an elongate shaft and the second component comprises a hub.

37. The method of claim 29, wherein the first component comprises an elongate shaft and the second component comprises a strain relief.

38. The method of claim 29, wherein the first component comprises a strain relief and the second component comprises a hub.